Canadian Transportation Accident Investigation and Safety Board

Bureau canadien d'enquête sur les accidents de transport et de la sécurité des transports

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AVIATION SAFETY RECOMMENDATIONS

CTAISB A90-57, 90-58, 90-59 and 90-60

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FORWARDED TO:

The Honourable Doug Lewis, P.C., Q.C., M. P.
Minister of Transport

Background

Over the last five years, more than sixty reports received through the Confidential Aviation Safety Reporting Program (CASRP) have expressed concern that the amount and/or size of carry-on baggage being taken on board aircraft sometimes exceeds the available storage space. These reports have been submitted by flight attendants (F/As), flight crews and passengers; all have expressed their concern over the lack of control and the lack of clear guidelines regarding the amount, size and weight of carry-on baggage that can be safely carried in aircraft cabins. Flight attendants report that they have been unable to comply with the instructions of the applicable Air Navigation Order and have had to stow excess baggage in aircraft lavatories, in empty trolley storage areas, behind last-row seats without side-restraint bars and in other unapproved aircraft compartments. The reporters worry that the presence of excess baggage could impede emergency evacuations and/or restrict access to emergency equipment, thus increasing the risk of injury or death. Similarly, overweight baggage in overhead bins can be hazardous in an aircraft accident or in an encounter with severe turbulence.

Data from past accidents are not particularly helpful in validating the dangers inherent in carrying excess baggage in aircraft cabins. Fortunately, aircraft accidents involving time-critical passenger evacuations are relatively infrequent events world-wide. When they do occur, the investigation reports rarely contain much detail as to the impediments to successful

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evacuation. In the traumatic aftermath of a post-crash fire, the issue of security of cabin baggage is naturally not the primary focus of the investigation. After an intense post-crash fire, there may be insufficient evidence to form definitive conclusions. Victims are often unable to provide testimony as to why they were unable to evacuate the burning aircraft.

Nevertheless, airline crews and passengers continue to observe in-flight situations where cabin baggage would create a severe impediment to efficient evacuation in the event of a crash and/or fire - an impediment which could cheat a potential survivor of the extra seconds needed to reach safety.

Regardless of the actual occurrence record, in accidents requiring rapid passenger evacuation, any loose or improperly stowed baggage must be viewed as a potential safety hazard.

In January 1986, in response to reports received via the CASRP, an Aviation Safety Advisory was sent to Transport Canada drawing attention to the problems associated with excess carry-on baggage. In their response, Transport Canada officials indicated that two courses of action had been proposed to address the problem. The first involved an approach to Canadian air carriers through the Air Transport Association of Canada (ATAC) to have criteria developed to improve the control of carry-on baggage. Once the criteria had been implemented, a survey was to be initiated to determine if the problem had been rectified. Dependent upon the outcome, the second course of action was to consider developing more stringent legislation.

As a result of further reports through the CASRP, an Aviation Safety Information Letter was sent to Transport Canada in July 1986, providing details of how airline personnel were apparently helping passengers with excess carry-on baggage to board aircraft. In January 1987, as a result of further concerns being reported to the CASRP, supplementary information was provided to Transport Canada, drawing attention to the continuing problem of excess carry-on baggage. In response, Transport Canada officials indicated that they had decided to prepare an amendment to Air Navigation Order, Series VII, No. 4, Restraint of Carry-On Baggage Order. The amendment would require stricter controls of carry-on baggage permitted in the aircraft cabin.

Four years have passed since the initial Aviation Safety Advisory identified the aviation safety deficiency relating to excess and oversized carry-on baggage. Over two years have passed since the T.C. proposal to modify ANO Series VII, No. 4, and it appears that, given the time required for legislative review and consultation with industry, the amended legislation is still some time away from being enacted. Meanwhile, reports continue to be

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received through the CASRP from people who are frustrated and concerned with this on-going, nation-wide problem. It is apparent that this potentially serious aviation safety deficiency is the result of air carriers failing to comply with existing legislation, a lack of clear definition as to size, weight and amount of carry-on baggage that is permitted, and a lack of understanding on the part of passengers of the safety implications of this issue.

Regulatory Compliance

Air Navigation Order Series VII, No. 4 Order Respecting Restraint of Carry-On Baggage, requires that:

> "No air carrier shall permit a passenger to carry any article of baggage on an aeroplane unless that article is stowed during take-off, landing and any period of in-flight turbulence
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> a) in a compartment or over-head clothing rack that has been approved by the Minister for the stowage of carry-on baggage; or
>
> b) under a passenger seat."

A. N. O. Series VII, No. 4 places the responsibility for enforcing carry-on baggage restrictions on the air carrier. Confidential reports received through the CASRP indicate that air carriers have not set up adequate screening methods to ensure that excess baggage and articles inappropriate as carry-on baggage will be intercepted prior to being taken into the passenger cabin. Passengers often attempt to board aircraft with oversized and/or overweight baggage which is not declared at the time of check-in. Minimal screening of excess or oversized baggage is undertaken by ticket agents, and passengers are often able to proceed to the security check point with these items. Ideally, if all other checks fail, any excess or oversized carry-on baggage should be intercepted when the passenger reaches the security check point, the last check prior to boarding the aircraft. However, reporters observe that this is not occurring.

The air carriers seem to assume that airport security personnel are checking the size, weight and amount of passengers' carry-on baggage. However, CASRP reports indicate that some security personnel only screen for dangerous goods such as weapons or bombs. Although they may occasionally intercept oversized/excess items, reportedly, these specific checks fall outside their mandate. From the reports, it appears that the absence of clear direction and assignment of specific responsibility in respect of carry-on baggage may have led to the lack of adequate screening and control of such baggage <u>before</u> passengers reach the aircraft.

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Security personnel report that when they attempt to intercept oversized or excess baggage, they frequently encounter opposition from passengers and from management. If a traveller complains to an airline supervisor, these bags are often allowed through the security check point. Probably as a result of this lack of managerial support, reporters have witnessed security personnel regularly lifting oversized bags over or around the steel frames which are used to outline the average underseat storage area.

Security company management in one case even advised an employee that his consistent refusal to allow oversized items through could adversely affect the employee's job security. The pressure exerted on employees by management may be understandable in the light of another report received by CASRP which alleged that the security companies have been advised by the air carriers who hired them that continual rejection of passengers' baggage could jeopardize contract renewals.

Clearly, the airlines are under significant pressures to maintain customer satisfaction in a highly competitive market; no single company can afford to diligently enforce the regulations if their competitors do not. In the case of small air carriers, the aircraft often have little or no stowage space within the aircraft passenger cabin, other than the space under the seats, to ensure the proper securing of carry-on baggage. However, F/As allege their companies also choose to ignore this problem in order to remain competitive.

Reporters feel that since one cannot always anticipate stowage problems, there should be a means to off-load baggage as soon as an excess becomes evident. F/As have noted instances where they had identified excesses in cabin baggage when the doors were still open. The excess baggage was collected, but baggage handlers were not available for off-loading it. In another report, an F/A advised the Captain about excess baggage, but the baggage was not off-loaded because the Captain was concerned about delaying the flight, thereby degrading their "on-time performance" record.

According to a number of F/As, the lack of efficient off-loading systems and the "on-time performance" requirements, in combination with apparent system breakdowns, have resulted in numerous instances where aircraft doors are closed and the aircraft have started to taxi while the F/As were still struggling to secure carry-on baggage that far exceeded the aircraft cabin's approved stowage space. The extra time required to deal with excess baggage problems has often left flight attendants with little time to complete other mandatory safety checks prior to take-off, which they feel aggravates the safety problem even further.

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The CTAISB is concerned that lack of compliance with the current regulations is contributing to excess carry-on baggage that could affect the successful evacuation of an aircraft in an emergency. Because of the highly competitive nature of the industry, individual companies are understandably reluctant to unilaterally enforce current regulations for fear of losing market share. Therefore, the Board recommends that:

> The Department of Transport increase the level of monitoring of carry-on-baggage to ensure consistent compliance with the intent of current legislation for all Canadian air carriers.
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> CTAISB A90-57

Passenger Awareness

More and more passengers are attempting to avoid the time-consuming task of searching for their checked luggage at destination. This has spawned the creation of soft-sided, carry-on luggage/garment bags. These lightweight bags were originally created to be conveniently stowed under the seat. Nowadays these bags are much larger and often are over-filled. One report alleged that it took two F/As to lift just one of these garment bags! Some of these garment bags have a metal bar across the width of the bag which can preclude the F/As being able to hang up the bag in the allotted space.

F/As frequently observe passengers pushing obviously heavy luggage into overhead bins that are already quite full. As a consequence, F/As suspect that on occasion the weight restrictions of individual storage bins may be exceeded. If indeed this occurs, it jeopardizes the safety of passengers who may be struck by these items should the compartments give way under increased loading (e.g. in a turbulence encounter or accident). Presently, there is no system in place to assist F/As in effectively determining the weight of a single item; nor is there any means to determine whether the combined weight of stowed carry-on baggage has exceeded the weight restriction which is clearly indicated on each overhead storage compartment.

Improperly stowed items falling from overhead bins can injure and/or incapacitate passengers and flight attendants. The CTAISB is aware of two instances where F/As have been injured by objects falling from overcrowded bins. In one case, the F/A was unable to carry out her duties during the remainder of the flight. This is particularly disconcerting since one of an F/A's primary responsibilities is to assist with and direct evacuation procedures.

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The volume of excess and oversized baggage found in passenger cabins indicates a lack of understanding of the safety implications by passengers who, for various reasons, do not want to check in some or all of their baggage before boarding. Some of their reasons appear to be:

a) attempting to save time on arrival by not having to wait for their baggage;

b) ensuring that their baggage is not misrouted;

c) avoiding having to pay a surcharge on any excess baggage that has to be checked; and,

d) fear of losing a particularly valuable article, or having it damaged.

On the other hand, part of the problem can be attributed to a general lack of awareness on the part of the travelling public. Passengers need to be warned prior to arriving at the airport as to what can be safely carried on board an aircraft. The Board believes that much of the problem could be alleviated by enhancing passenger awareness of the consequences that excess, oversized and overweight baggage can create in an emergency. Therefore, the CTAISB recommends that:

The Department of Transport ensure that passengers originating their travel in or from Canada are made aware of:

a) the safety hazards created by excess carry-on baggage in the cabin area; and

b) the size, amount and weight of articles that can safely be taken on board as carry-on baggage, according to aircraft type.

CTAISB A90-58

Legislative Requirements

The nature of air travel has evolved significantly since ANO Series VII, No. 4 was promulgated in 1969. Increased volumes of passenger traffic at hub centres have resulted in congestion and delays awaiting checked baggage. All too often, luggage is lost or misses a connecting flight. Business travellers cannot accept such disruptions to their schedules, and hence they make use of the latest carry-on bag designs. Increasingly, tourists are travelling with abundant items purchased abroad, including unpacked duty-free items; this is most noticeable on charter flights, where the seating density is highest. Aircraft

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manufacturers have responded to these changes in market demands by providing significantly more spacious overhead bins for carry-on baggage. In turn, marketers have promoted the use of this increased capability, and this encourages even more carry-on baggage. A vicious circle has been created. The problem is exacerbated by the wide variety of aircraft currently in service; many of the older and smaller aircraft are not capable of accommodating the amount of carry-on baggage possible in the new wide-bodied jets.

Clearly, the current legislation requires clarification to account for the changed nature of air travel. The Board recognizes that revisions to ANO Series VII, No. 4 are currently undergoing legislative review, and that the industry and the travelling public will have the opportunity to comment when this draft legislation is promulgated in Part I of the Canada Gazette. Since the Board believes that many of the current problems with respect to excesses in carry-on baggage on many flights are directly attributable to a lack of clear definition as to what can legitimately pass as carry-on baggage, the CTAISB recommends that:

> The Department of Transport ensure that any new or revised carry-on baggage legislation, standards or guidelines clearly define;
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> 1) the maximum number of items (including duty free packages) permitted as carry-on baggage;
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> 2) the weight and size limitations for each item and for their total; and
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> 3) any specific constraints that may be applicable to a particular aircraft type.
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> CTAISB A90-59

As mentioned above, the air carriers are operating in a highly competitive market. Dissatisfied air travellers can frequently find another airline which will accommodate their wishes. Personal delays at a baggage carousel, lost baggage, or a hassle during the check-in and boarding procedures can result in an individual company losing a frequent flyer. For carry-on-baggage legislation to be effective, it must affect all air carriers, including foreign air carriers, equitably. Canadian carriers could be put at some disadvantage if strict carry-on-baggage legislation was enforced for them, while lax regulations were in effect for a competing foreign carrier operating to the same destination from the same point of departure. Resolution of the safety aspects of carry-on baggage will require international cooperation. Therefore, the CTAISB recommends that:

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The Department of Transport take a leadership role in the appropriate international fora in promoting the development and implementation of world-wide standards for carry-on-baggage.

CTAISB A90-60

John W. Stants
Chairman
On behalf of the Board